In the Claims:

Please cancel claims 1 to 54, 85 to 105, 112, and 115 to 129 without prejudice or disclaimer. Please substitute the following claims 55 to 57, 61 to 68, 70 to 74, 78, 80 to 84, 106, 109, 113, 130 and 135 for pending claims 55 to 57, 61 to 68, 70 to 74, 78, 80 to 84, 106, 109, 113, 130 and 135:

55. A method for detecting DNA or RNA in a test sample, said method comprising:

(a) hybridizing a single stranded target polynucleotide with an abortive promoter cassette comprising a sequence that hybridizes to the single stranded target polynucleotide, and a region that can be detected by transcription by a polymerase;

(b) incubating said target polynucleotide with an RNA polymerase, an initiator, and a terminator;

(c) synthesizing an oligonucleotide transcript that is complementary to the initiation start site of said abortive promoter cassette, wherein said initiator is extended until said terminator is incorporated into said oligonucleotide transcript, thereby synthesizing multiple reiterative oligonucleotide transcripts; and

(d) detecting or quantifying said reiterative oligonucleotide transcripts.

56. A method for detecting the presence of pathogens in a test sample, said method comprising:

(a) hybridizing a single stranded target pathogen polynucleotide in said test sample with an abortive promoter cassette comprising a region that can be detected by transcription by a polymerase;

(b) incubating said target polynucleotide and an initiator with an RNA polymerase, and a terminator;

(c) synthesizing an oligonucleotide transcript that is complementary to initiation start site of the abortive promoter cassette, wherein said initiator is extended until said terminator is incorporated into said oligonucleotides thereby synthesizing multiple abortive reiterative oligonucleotide transcripts; and

(d) determining the presence of a pathogen by detecting or quantifying said reiterative oligonucleotide transcripts synthesized from said test sample.

57. The method of any one of claims 55 or 56, further comprising detecting or quantifying said reiteratively synthesized oligonucleotide transcript by modifying a nucleotide in at least one of the members selected from the group consisting of said terminator, and said initiator.

61. The method of any one of claims 55 or 56, wherein said polymerase is selected from the group consisting of: a DNA-dependent RNA polymerase, an RNA-dependent RNA polymerase and a modified RNA polymerase, and a primase.

62. The method of claim 61, wherein said polymerase comprises an RNA polymerase derived from one of *E. coli, E. coli* bacteriophage T7, *E. coli* bacteriophage T3, and *S. typhimurium* bacteriophage SP6.

63. The method of any one of claims 55 or 56, wherein said abortive oligonucleotides being synthesized are one of the lengths selected from the group consisting of: about 2 to about 26 nucleotides, about 26 to about 50 nucleotides and about 50 nucleotides to about 100 nucleotides.

64. The method of any one of claims 55 or 56, wherein said chain terminator comprises a nucleotide analog.

65. The method of claim 55 or 56, wherein said initiator comprises nucleotides selected from the group consisting of: 1-25 nucleotides, 26-50 nucleotides, 51-75 nucleotides, 76-100 nucleotides, 101-125 nucleotides, and 126-150 nucleotides, 151-175 nucleotides, 176-200 nucleotides, 201-225 nucleotides, 226-250 nucleotides, and greater than 250 nucleotides.

66. The method of any one of claims 55 or 56, wherein said single-stranded target polynucleotide is one of DNA and RNA.

67. The method of any one of claims 55 or 56, wherein said inititator is RNA.

68. The method of any one of claims 55 or 56, wherein said initiator comprises nucleotides selected from the group consisting of: 1-25 nucleotides, 25-50 nucleotides, 50-75 nucleotides, 75-100 nucleotides, 100-125 nucleotides, and 125-150 nucleotides, 150-175 nucleotides, 175-200 nucleotides, 200-225 nucleotides, and 225-250 nucleotides.

70. The method of any one of claims 55 or 56, wherein said abortive promoter cassette further comprises an abortive promoter cassette linker which is adapted to hybridize to an end of said target pathogen polynucleotide.

71. A method for detecting pathogens in a test sample, said method comprising:

(a) immobilizing a capture probe designed to hybridize with a target polynucleotide in said test sample;

(b) hybridizing said capture probe with a test sample that potentially contains said target polynucleotide;

(c) hybridizing a single stranded target polynucleotide in said test sample with an abortive promoter cassette comprising a region that hybridizes to the single stranded target pathogen polynucleotide, and a region that can be detected by transcription by a polymerase;

(d) incubating said target polynucleotide with an RNA-polymerase, initiator, and a terminator;

(e) synthesizing an oligonucleotide transcript that is complementary to the transcription initiation start site of said abortive promoter cassette, wherein said initiator is extended until said terminator is incorporated into said oligonucleotides thereby synthesizing multiple reiterative oligonucleotide transcripts; and

(f) determining the presence or absence of a pathogen by detecting or quantifying said reiterative oligonucleotide transcripts.

72. A method for detecting mRNA expression in a test sample, the method comprising:

(a) hybridizing a target mRNA sequence with an abortive promoter cassette comprising a region that can be detected by transcription by a polymerase;

(b) incubating said target mRNA sequence with an RNA-polymerase, an initiator, and a terminator;

(c) synthesizing an oligonucleotide transcript that is complementary to the transcription initiation start site, wherein said initiator is extended until said terminator is incorporated into said oligonucleotide transcript, thereby synthesizing multiple reiterative oligonucleotides; and

(d) determining the presence or absence of the mRNA by detecting or quantifying said reiterative oligonucleotide transcripts.

74. The method of claim 72, wherein modifying further comprises incorporating an independently selected label moiety into at least one of said initiator, said terminator, and said oligonucleotides.

78. The method of claim 72, wherein said polymerase comprises an RNA polymerase derived from one of *E. coli*, *E. coli* bacteriophage T7, *E. coli* bacteriophage T3, and *S. typhimurium* bacteriophage SP6.

80. The method of claim 79, wherein said initiator comprises nucleotides selected from the group consisting of: 1-25 nucleotides, 26-50 nucleotides, 51-75 nucleotides, 76-100 nucleotides, 101-125 nucleotides, 126-150 nucleotides, 151-175 nucleotides, 176-200 nucleotides, 201-225 nucleotides, 226-250 nucleotides, and greater than 250 nucleotides.

81. The method of claim 72, wherein said abortive oligonucleotides being synthesized

are one of the lengths selected from the group consisting of: about 2 to about 26 nucleotides, about 26 to about 50 nucleotides, about 50 nucleotides to about 100 nucleotides, and greater than 100 nucleotides.

83. The method of claim 72, wherein said abortive promoter cassette comprises an abortive promoter cassette linker which is adapted to hybridize to a poly-A tail of said target mRNA sequence.

84. The method of claim 72, wherein said chain terminator is a nucleotide analog.

106. A method for detecting a target protein in a test sample, the method comprising:

(a) covalently attaching the target protein to an abortive promoter cassette by a reactive abortive promoter cassette linker, wherein said abortive promoter cassette comprises a region that can be detected by transcription by a polymerase;

(b) incubating said target protein with an RNA-polymerase, an initiator, and a terminator;

(c) synthesizing an oligonucleotide transcript that is complementary to the transcription initiation start site of the abortive promoter cassette, wherein said initiator is extended until said terminator is incorporated into said oligonucleotide transcript, thereby synthesizing multiple reiterative oligonucleotide transcripts; and

(d) determining the presence or absence of the target protein by detecting or quantifying said reiterative oligonucleotide transcripts.

109. The method of claim 106, wherein said abortive promoter cassette linker is covalently attached to the target protein by thiol-reactive or amine-reactive crosslinking agents.

113. A method for detecting pathogens, said method comprising:

(a) obtaining a sample in need of detection of a pathogen

(b) hybridizing a single stranded target pathogen polynucleotide in said sample

with an abortive promoter cassette comprising a nucleotide sequence that hybridizes to single stranded target pathogen polynucleotide, and a region that can be detected by transcription by a polymerase;

(c) incubating said target polynucleotide and initiator with an RNA-polymerase, and a terminator;

(d) synthesizing an oligonucleotide transcript that is complementary to the initiation start site of the abortive promoter cassette, wherein said initiator is extended until said terminator is incorporated into said oligonucleotides thereby synthesizing multiple abortive reiterative oligonucleotide transcripts; and

(e) determining the presence of a pathogen by detecting or quantifying said reiteratively synthesized oligonucleotide transcripts synthesized from said sample.

130. The method of claim 113, wherein said sample is obtained from the group consisting of: animal, plant or human tissue, blood, saliva, semen, urine, sera, cerebral or spinal fluid, pleural fluid, lymph, sputum, fluid from breast lavage, mucusoal secretions, animal solids, stool, cultures of microorganisms, liquid and solid food and feed-products, waste, cosmetics, air and water.

135. The method of any one of claims 55, 56, 71, 72, 106, or 113, wherein said initiator is selected from the group consisting of: nucleosides, nucleoside analogs, nucleotides, and nucleotide analogs.

Please add new claims 136 to 148:

136. A method for detecting DNA or RNA in a test sample, said method comprising:

(a) hybridizing a single stranded target polynucleotide with an abortive promoter cassette comprising a sequence that hybridizes to the single stranded target polynucleotide, and a region that can be detected by transcription by a polymerase;

(b) incubating said target polynucleotide with an RNA polymerase and an

initiator;

(c) synthesizing an oligonucleotide transcript that is complementary to the initiation start site of said abortive promoter cassette, wherein said initiator is extended until termination occurs through nucleotide deprivation; thereby synthesizing multiple reiterative oligonucleotide transcripts; and

(e) detecting or quantifying said reiterative oligonucleotide transcripts.

137. The method of claim 136 further comprising:

(a) immobilizing a capture probe designed to hybridize with a target polynucleotide in said test sample;

(b) hybridizing said capture probe with a test sample that potentially contains said target polynucleotide.

138. The method of claims 56, 71, 113, or 138, further comprising incubating said target polynucleotide with additional ribonucleotides.

139. The method of claim 138, wherein said ribonucleotides are modified.

140. The method of claim 139, wherein said modification comprises incorporating a labeling moeity.

141. The method of claim 136 for detecting the presence of pathogens in a test sample.

142. The method of any one of claims 56, 71, 113, or 141, wherein the pathogen is a virus.

143. The method of any one of claims 56, 71, 113, or 141, wherein the pathogen is bacterial.

144. The method of any one of claims 55, 56, 71, 113, or 136, wherein the target polynucleotide is RNA.

145. The method of claim 144, wherein the RNA is mRNA.

146. The method of claim 144, wherein the RNA polymerase is an RNA-dependent RNA polymerase.

147. The method of claim 144, wherein the RNA-dependent RNA-polymerase is poliovirus RNA polymerase.

148. The method of claim 144, further comprising (a) incubating said RNA with a reverse transcriptase enzyme.